

Abstract

A vacuum electron device with a photonic bandgap structure that provides the ability to tune the behavior of the device to a particular mode of a plurality of modes of propagation. The photonic bandgap structure comprises a plurality of members, at least one of which is movable, and at least one of which is temperature controlled. The photonic bandgap structure makes
5 possible the selection of one mode of propagation without the necessity to build structures having dimensions comparable to the wavelength of the propagation mode.

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